4-253-437-**11**(1)

SONY

FM Stereo FM/AM Receiver

Operating Instructions

Owner's Record

The model and serial numbers are located on the rear of the unit. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. _____ Serial No. _____

STR-DE197

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WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

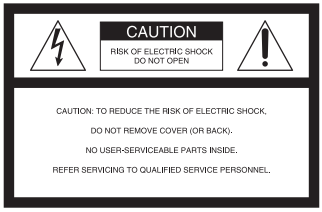
To prevent fire, do not cover the ventilation of the apparatus with newspapers, table-cloths, curtains, etc. And don't place lighted candles on the apparatus.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

Don't throw away batteries with general house waste; dispose of them correctly as chemical waste.

For customers in the United States


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

CAUTION

You are cautioned that any changes or modification not expressly approved in this manual could void your authority to operate this equipment.

Note to CATV system installer:

This reminder is provided to call CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

For customers in Canada

CAUTION

TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

Except for customers in Europe

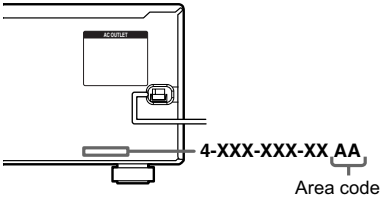
ENERGY STAR® is a U.S. registered mark. As an ENERGY STAR® partner, Sony Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

About This Manual

- The instructions in this manual are for model STR-DE197. Check your model number by looking at the lower right corner of the front panel.
- The instructions in this manual describe the controls on the receiver. You can also use the controls on the supplied remote if they have the same or similar names as those on the receiver. For details on the use of your remote, see pages 19–22.

About area codes

The area code of the receiver you purchased is shown on the lower portion of the rear panel (see the illustration below).



Any differences in operation, according to the area code, are clearly indicated in the text, for example, “Models of area code AA only”.

Note for the supplied remote

For RM-U185

The DVD button on the remote is not available for receiver operation.

Table of Contents

Getting Started

1: Connecting your components 5
2: Connecting the antennas 7
3: Connecting speakers 8
4: Connecting the AC power cord 9

Amplifier Operation

Selecting the component 10
Listening to FM/AM radio 10
Storing FM stations automatically 11
— AUTOBETICAL
(Models of area code CEL, CEK only)
Presetting radio stations 12
Using the Radio Data System (RDS) 13
(Models of area code CEL, CEK only)
Changing the display 15
Adjusting the sound 15

Other Operations

Naming preset stations and inputs 16
Using the Sleep Timer 17
Selecting the speaker system 17
Recording 18

Operations Using the Remote RM-U185

Before you use your remote 19
Remote button description 19
Changing the factory setting of an input button 22

Additional Information

Precautions 23
Troubleshooting 24
Specifications 26
List of button locations and reference pages 28

1: Connecting your components

Required cords

The following hookup diagrams assume the use of the optional connection cord A (not supplied).

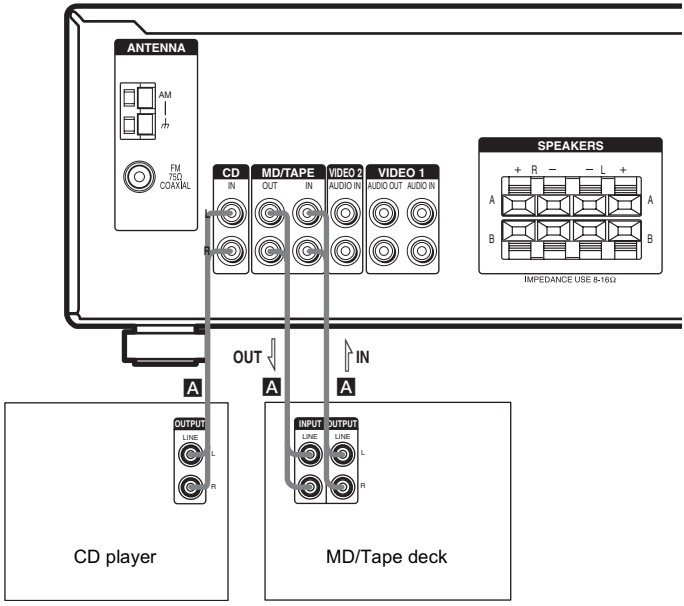
A Audio cord

White (L)
Red (R)

Notes

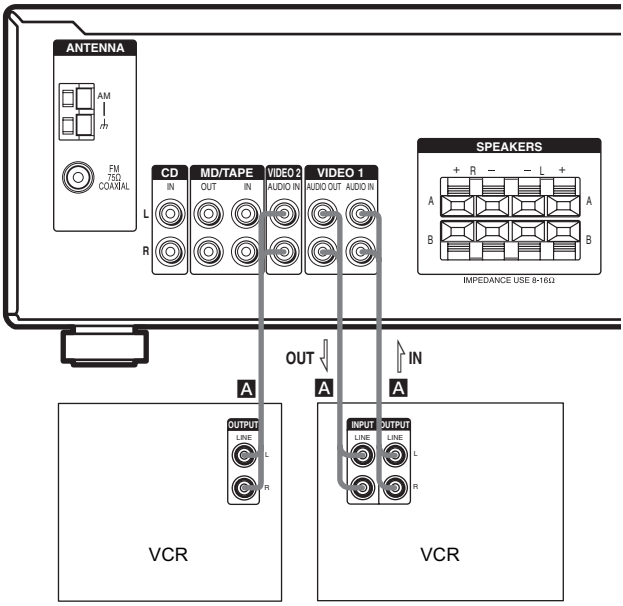
- Turn off the power to all components before making any connections.
- Be sure to make connections firmly to avoid hum and noise.
- When connecting an audio cord, be sure to match the color-coded pins to the appropriate jacks on the components: white (left, audio) to white; and red (right, audio) to red.

Hooking up audio components



continued

Hooking up video components

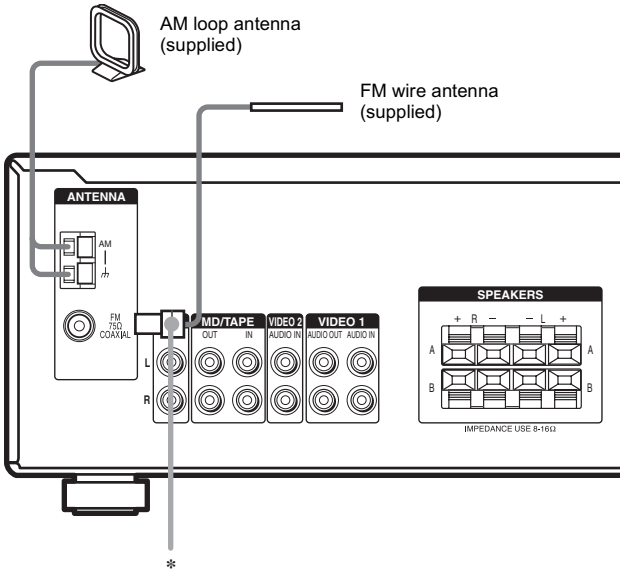


Note

You can record the audio signals of the components connected to this receiver. For example, connect a recording component such as a cassette deck to the VIDEO 1 AUDIO OUT jacks and press the input buttons (VIDEO 2, MD/TAPE, CD, TUNER) to select the component to be recorded.

2: Connecting the antennas

Connect the supplied AM loop antenna and FM wire antenna.



* The shape of the connector varies depending on the area code.

Notes

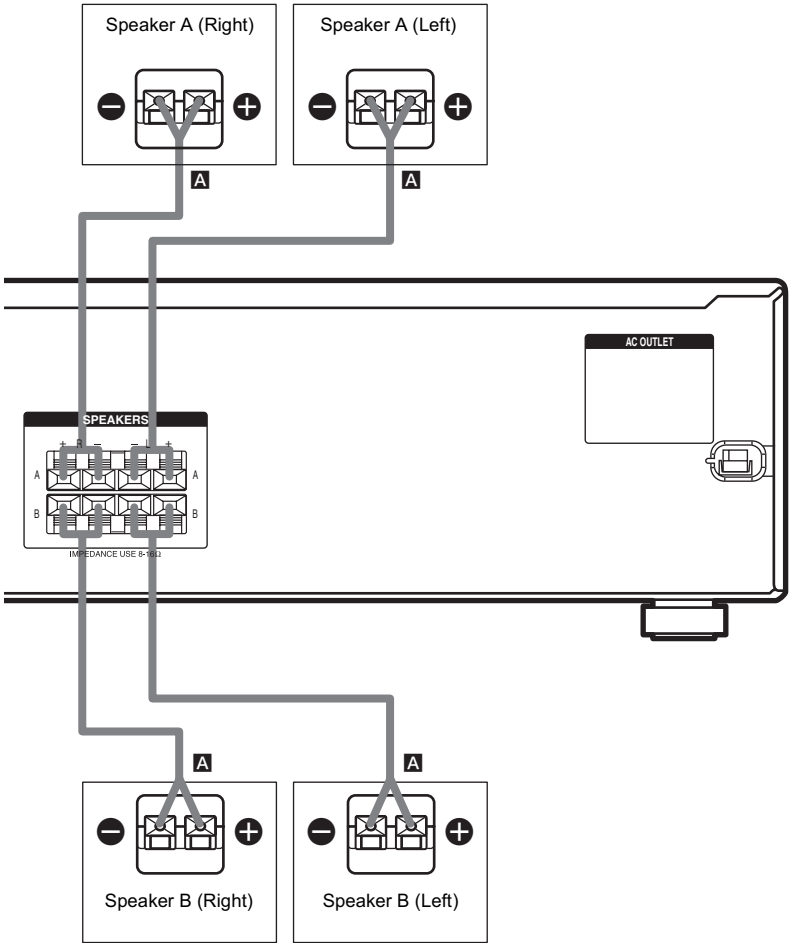
- To prevent noise pickup, keep the AM loop antenna away from the receiver and other components.
- Be sure to fully extend the FM wire antenna.
- After connecting the FM wire antenna, keep it as horizontal as possible.

3: Connecting speakers

Required cords

A Speaker cords (not supplied)

(+)
(–)

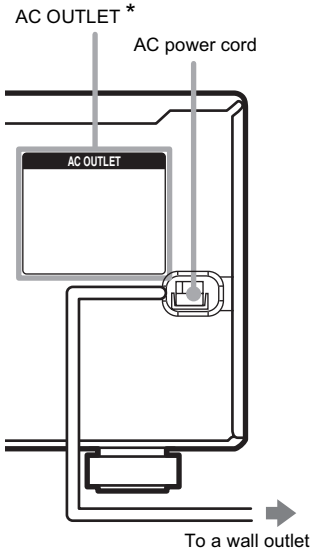


* If you have an additional speaker system, connect them to the SPEAKERS B terminals. You can select the speakers you want to use with the SPEAKER A and SPEAKER B buttons. For details, see “Selecting the speaker system” (page 17).

4: Connecting the AC power cord

Connecting the AC power cord

Connect the AC power cord to a wall outlet.



* The configuration, shape, and number of AC outlets vary according to the model and the area code.

Notes

- The AC OUTLET on the rear of the receiver is a switched outlet, which supplies power to the connected component only while the receiver is turned on.
- Make sure that the total power consumption of the component connected to the receiver's AC OUTLET does not exceed the wattage stated on the rear panel. Do not connect high-wattage electrical home appliances such as electric irons, fans, or TVs to this outlet. This may cause a malfunction.

Performing initial setup operations

Before using the receiver for the first time, initialize the receiver by performing the following procedure.
This procedure can also be used to return settings you have made to their factory defaults. Use the buttons on the receiver for the operation.

1 **Press I/⏻ to turn off the receiver.**

2 **Hold down I/⏻ for 5 seconds.**

"INITIAL" appears in the display.

The following are reset to their factory settings.

- All preset stations.
- All index names for inputs and preset stations.
- All settings for the speaker system and sound adjustments.
- MASTER VOLUME –/+ is set to "VOL MIN".

Amplifier Operation

Selecting the component

1 Press input buttons to select the input.

To select the	Press
VCR	VIDEO 1 or VIDEO 2
MD or tape deck	MD/TAPE
CD player	CD
Built-in tuner (FM/AM)	TUNER

The selected input appears in the display.

2 Turn on the component and start playback.

Note

If you select the VCR, set the TV's video input to match the component you selected.

3 Turn MASTER VOLUME –/+ to adjust the volume.

Note

To avoid damaging your speakers, make sure that you turn down the volume before you turn off the receiver.

To mute the sound

Press MUTING on the remote.
The muting function will be canceled when you do the following.

- Press MUTING on the remote again.
- Turn the power off.
- Turn MASTER VOLUME –/+ to increase the volume.

To use the headphones

Connect the headphones to the PHONES jack and set the SPEAKER A and SPEAKER B buttons to off.

Listening to FM/AM radio

You can listen to FM and AM broadcasts through the built-in tuner. Before operation, make sure you have connected the FM and AM antennas to the receiver (see page 7).

Tip

The tuning scale differs depending on the area code as shown in the following table. For details on area codes, see page 3.

Area code	FM	AM
U, CA	100 kHz	10 kHz*
CEL, CEK	50 kHz	9 kHz

* The AM tuning scale can be changed (see page 26).

Automatic tuning

If you do not know the frequency of the station you want, you can let the receiver scan all available stations in your area.

1 Press TUNER.

The last received station is tuned in.

2 Press FM or AM to select the FM or AM band.

3 Press TUNING/CHAR + or TUNING/CHAR –.

Press TUNING/CHAR + to scan from low to high; press TUNING/CHAR – to scan from high to low.

The receiver stops scanning whenever a station is received.

Tip

If "STEREO" flashes in the display and the FM stereo reception is poor, press FM MODE to change to monaural (MONO). You will not be able to enjoy the stereo effect, but the sound will be less distorted. To return to stereo mode, press FM MODE again.

Direct tuning

You can enter the frequency of the station you want directly.

1 **Press TUNER.**

The last received station is tuned in.

2 **Press FM or AM to select the FM or AM band.**

3 **Press DIRECT.**

4 **Press the numeric buttons to enter the frequency.**

Example 1: FM 102.50 MHz

Press 1 ➡ 0 ➡ 2 ➡ 5 ➡ 0

Example 2: AM 1,350 kHz

(You do not have to enter the last "0" when the tuning scale is set to 10 kHz.)

Press 1 ➡ 3 ➡ 5 ➡ 0

If you have tuned in an AM station, adjust the direction of the AM loop antenna for optimum reception.

If you cannot tune in a station and the entered numbers flash

Make sure you have entered the right frequency. If not, repeat steps 3 and 4. If the entered numbers still flash, the frequency is not used in your area.

Storing FM stations automatically

— AUTOBETICAL

(Models of area code CEL, CEK only)

This function lets you store up to 30 FM and FM RDS stations in alphabetical order without redundancy. Additionally, it only stores the stations with the clearest signals.

If you want to store FM or AM stations one by one, see "Presetting radio stations".

Use the buttons on the receiver for the operation.

1 **Press I/⏻ to turn off the receiver.**

2 **Hold down MEMORY/ENTER and press I/⏻ to turn the receiver back on.**

"AUTO-BETICAL SELECT" appears in the display and the receiver scans and stores all the FM and FM RDS stations in the broadcast area.

For RDS stations, the tuner first checks for stations broadcasting the same program, then stores only the one with the clearest signal. The selected RDS stations are sorted alphabetically by their Program Service name, then assigned a 2-character preset code. For more details on RDS, see page 13.

Regular FM stations are assigned 2-character preset codes and stored after the RDS station.

When done, "FINISH" appears in the display momentarily and the receiver returns to the normal operation.

Notes

- Do not press any button on the receiver or supplied remote during autobetical operation, except I/⏻.
- If you move to another area, repeat this procedure to store stations in your new area.
- For details on tuning the stored stations, see "Tuning to preset stations".
- If you move the antenna after storing stations with this procedure, the stored settings may no longer be valid. If this happens, repeat this procedure to store the stations again.

Presetting radio stations

You can preset up to 30 FM or AM stations. Then you can easily tune in the stations you often listen to.

Presetting radio stations

1 **Press TUNER.**

The last received station is tuned in.

2 **Tune in the station that you want to preset using Automatic Tuning (page 10) or Direct Tuning (page 11).**

3 **Press MEMORY/ENTER.**

"MEMORY" appears in the display for a few seconds. Do steps 4 to 5 before the display goes out.

4 **Press SHIFT repeatedly to select a memory page (A, B or C).**

Each time you press SHIFT, the letter "A", "B", or "C" appears in the display.

5 **Press the numeric buttons to select a preset number.**

If "MEMORY" goes out before you press the preset number, start again from step 3.

6 **Repeat steps 2 to 5 to preset another station.**

Note

If the AC power cord is disconnected for about one week, the preset stations will be cleared from the receiver's memory, and you will have to preset the stations again.

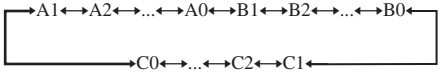
Tuning to preset stations

1 **Press TUNER.**

The last received station is tuned in.

2 **Press PRESET TUNING + or PRESET TUNING – repeatedly to select the preset station you want.**

Each time you press the button, you can select the preset station as follows:



Using the remote

1 Press TUNER.

2 Press CH/PRESET –/+ repeatedly to select the preset station you want.

To select the preset station directly

Press the numeric buttons on the remote. The preset station of the selected number in the current memory page is tuned in. Press SHIFT repeatedly on the remote to change the memory page.

Using the Radio Data System (RDS)

(Models of area code CEL, CEK only)

This receiver also allows you to use RDS (Radio Data System), which enables radio stations to send additional information along with the regular program signal. You can also display RDS information.

Notes

- RDS is operable only for FM stations.
- Not all FM stations provide RDS service, nor do they provide the same types of services. If you are not familiar with the RDS services in your area, check with your local radio stations for details.

Receiving RDS broadcasts

Simply select a station on the FM band using automatic tuning (page 10), direct tuning (page 11), or preset tuning (page 12).

When you tune in a station that provides RDS services, the program service name appears in the display.

Note

RDS may not work properly if the station you tuned to is not transmitting the RDS signal properly or if the signal strength is weak.

Displaying RDS information

While receiving an RDS station, press DISPLAY repeatedly.

Each time you press the button, RDS information on the display changes cyclically as follows:

Program Service name → Frequency → Program Type indication[a] → Radio Text indication[b] → Current Time indication (in 24-hour system)

[a] Type of program being broadcast (see page 14).

[b] Text messages sent by the RDS station.

Notes

- If there is an emergency announcement by government authorities, “ALARM” flashes in the display.
- When the message consists of 9 characters or more, the message scrolls across the display.
- If a station does not provide a particular RDS service, “NO XXXX” (such as “NO TEXT”) appears in the display.

continued

Description of program types

Program type indication	Description
NEWS	News programs
AFFAIRS	Topical programs that expand on current news
INFO	Programs offering information on a wide spectrum of subjects, including consumer affairs and medical advice
SPORT	Sports programs
EDUCATE	Educational programs, such as “how-to” and advice programs
DRAMA	Radio plays and serials
CULTURE	Programs about national or regional culture, such as language and social concerns
SCIENCE	Programs about the natural sciences and technology
VARIED	Other types of programs such as celebrity interviews, panel games, and comedy
POP M	Popular music programs
ROCK M	Rock music programs
EASY M	Easy Listening
LIGHT M	Instrumental, vocal, and choral music
CLASSICS	Performances of major orchestras, chamber music, opera, etc.
OTHER M	Music that does not fit into any categories above, such as Rhythm & Blues and Reggae
WEATHER	Weather information
FINANCE	Stock market reports and trading, etc.
CHILDREN	Programs for children
SOCIAL	Programs about people and the things that affect them
RELIGION	Programs of religious content
PHONE IN	Programs where members of the public express their views by phone or in a public forum
TRAVEL	Programs about travel. Not for announcements that are located by TP/TA
LEISURE	Programs on recreational activities such as gardening, fishing, cooking, etc.
JAZZ	Jazz programs
COUNTRY	Country music programs
NATION M	Programs featuring the popular music of the country or region
OLDIES	Programs featuring oldies music
FOLK M	Folk music programs
DOCUMENT	Investigative features
NONE	Any programs not defined above

Changing the display

Changing the information in the display

Press DISPLAY repeatedly.

Each time you press DISPLAY, the display will change cyclically as follows.
Index name of the input* ⟶ Selected input

When the tuner is selected

Program Service name** or preset station name* ⟶ Frequency ⟶ Program Type indication** ⟶ Radio Text indication** ⟶ Current Time indication (in 24-hour system)**

* Index name appears only when you have assigned one to the input or preset station (page 16). Index name does not appear when only blank spaces have been entered, or it is the same as the input name.

** During RDS reception only. (Models of area code CEL, CEK only. See page 13).

Adjusting the sound

Adjusting the speaker balance

You can adjust the speaker balance from BAL L+8 to BAL R+8 in 1 level step. The initial setting is BALANCE.

Press BALANCE L or BALANCE R repeatedly.

Each time you press the button, the display changes as follows:
BAL L+8 ... ⟷ BAL L+1 ... ⟷ BALANCE ⟷ BAL R+1 ... ⟷ BAL R+8

Adjusting the tone

You can adjust the tonal quality of the speakers using the TREBLE –/+ and BASS –/+ buttons. The initial setting is 0 dB.

Press TREBLE + or TREBLE – repeatedly to adjust the treble level and BASS + or BASS – repeatedly to adjust the bass level.

You can adjust from –10 dB to +10 dB in 2 dB steps.

Reinforcing the bass

Press BASS BOOST to reinforce the bass.

The BASS BOOST indicator lights up.

Other Operations

Naming preset stations and inputs

You can enter a name of up to 8 characters for preset stations and inputs selected with input buttons, and display it in the receiver's display. Use the buttons on the receiver for the operation.

1 To index a preset station

Press TUNER, then tune in the preset station you want to create an index name for (page 12).

To index an input

Press the input button to select the input you want to create an index name for.

2 Press NAME.

3 Use NAME and TUNING/CHAR + or TUNING/CHAR – to create an index name.

Press TUNING/CHAR + or TUNING/CHAR – repeatedly to select a character, then press NAME to move the cursor to the next position.

Tips

- You can select the character type as follows by pressing TUNING/CHAR + or TUNING/CHAR – repeatedly.
  Alphabet (upper case) ⟶ Numbers ⟶ Symbols
- To enter a blank space, press TUNING/CHAR + or TUNING/CHAR – repeatedly until a blank space appears in the display.
- If you made a mistake, press NAME repeatedly until the character you want to change flashes, then press TUNING/CHAR + or TUNING/CHAR – repeatedly to select the correct character.

4 Press MEMORY/ENTER to store the index name.

Note (Models of area code CEL, CEK only)

When you name an RDS station and tune in the station, the Program Service name appears instead of the name you entered. (You cannot change the name of a Program Service name. The name you entered will be overwritten by the Program Service name.)

Using the Sleep Timer

You can set the receiver to turn off automatically at a specified time. Use the remote for the operation.

Press SLEEP repeatedly while the power is on.

Each time you press SLEEP, the display changes cyclically as follows:
2-00-00 ⟶ 1-30-00 ⟶ 1-00-00 ⟶ 0-30-00 ⟶ OFF
The display dims after you have specified the time.

Tip

To check the remaining time before the receiver turns off, press SLEEP. The remaining time appears in the display. If you press SLEEP again, the sleep timer will be canceled.

Selecting the speaker system

You can select the speaker system you want to use.

To select the speakers connected to	Press
SPEAKERS A terminals	SPEAKER A
SPEAKERS B terminals	SPEAKER B
both SPEAKERS A and SPEAKERS B terminals (parallel connection)	SPEAKER A and SPEAKER B

The indicator lights up.

Tips

- The initial setting is SPEAKER A.
- Press SPEAKER A or SPEAKER B to turn off the indicator if you do not want to select the speaker system.

Recording

Before you begin, make sure you have connected all components properly.

Recording on an audio tape or MiniDisc

You can record on a cassette tape or MiniDisc using the receiver. See the operating instructions of your cassette deck or MD deck if you need help.

1 **Select the component to be recorded.**

2 **Prepare the component for playing.**

For example, insert a CD into the CD player.

3 **Insert a blank tape or MD into the recording deck and adjust the recording level, if necessary.**

4 **Start recording on the recording deck, then start playback on the playback component.**

Note

Some sources contain copy guards to prevent recording. In this case, you may not be able to record from the sources.

Recording on a video tape

You can record from a VCR or a TV using the receiver. You can also add audio from a variety of audio sources when editing a video tape. See the operating instructions of your VCR if you need help.

1 **Select the program source to be recorded.**

2 **Prepare the component for playing.**

For example, insert a video tape you want to record into VCR.

3 **Insert a blank video tape into the VCR (VIDEO 1) for recording.**

4 **Start recording on the recording VCR, then start playing the video tape you want to record.**

Tip

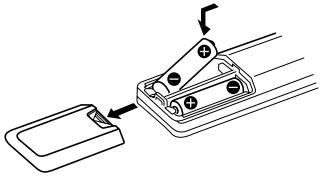
You can record the sound from any audio source onto a video tape while copying from a video tape. Locate the point where you want to start recording from another audio source, select the program source, then start playback. The audio from that source will be recorded onto the audio track of the video tape instead of the audio from the original medium. To resume audio recording from the original medium, select the video source again.

You can use the remote RM-U185 to operate the components in your system.

Before you use your remote

Inserting batteries into the remote

Insert R6 (size-AA) batteries with the + and – properly oriented in the battery compartment. When using the remote, point it at the remote sensor ⓡ on the receiver.



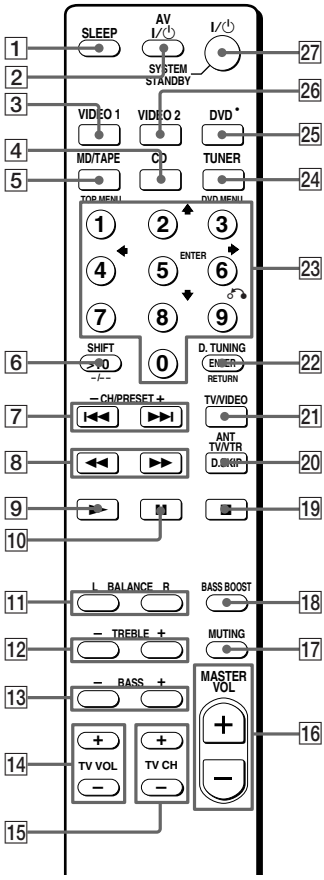
Tip

Under normal conditions, the batteries should last for about 6 months. When the remote no longer operates the receiver, replace all batteries with new ones.

Notes

- Do not leave the remote in an extremely hot or humid place.
- Do not use a new battery with an old one.
- Do not expose the remote sensor to direct sunlight or lighting apparatuses. Doing so may cause a malfunction.
- If you don't use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Remote button description



The tables below show the settings of each button.

Remote Button	Operations	Function
ANT TV/VTR 20	VCR	Selects output signal from the antenna terminal: TV signal or VCR program.

continued

Remote Button	Operations	Function
AV I/⏻ 2	TV/VCR/ CD player/ VCD player/ LD player/ DVD player/ MD deck/ DAT deck	Turns the audio and video components on or off.
BALANCE L/R 11	Receiver	Adjusts the speaker balance.
BASS –/+ 13	Receiver	Adjusts the bass level.
BASS BOOST 18	Receiver	Reinforces the bass.
CD 4	Receiver	To listen to compact disc.
CH/	Receiver	Selects preset stations.
PRESET –/+ 7	TV/VCR/ Satellite tuner	Selects preset channel.
D.SKIP 20	CD player/ VCD player/ DVD player/ MD deck	Skips discs (multi-disc changer only).
D.TUNING 22	Receiver	Enters direct tuning mode.
DVD 25	Receiver	To watch DVD.
DVD MENU 23	DVD player	Displays DVD menu.
ENTER 22	TV/VCR/ Satellite tuner/LD player/MD deck/ DAT deck/ Tape deck	After selecting a channel, disc or track using the numeric buttons, press to enter the value.
ENTER 23	DVD player	Enters the selection.
MASTER VOL +/– 16	Receiver	Adjusts the master volume of the receiver.
MD/TAPE 5	Receiver	To listen to Minidisc or audio tape.
MUTING 17	Receiver	Mutes the sound from the receiver.
RETURN 22	VCD player	Returns to the previous menu.
SHIFT 6	Receiver	Selects a memory page for presetting radio stations or tuning to preset stations.
SLEEP 1	Receiver	Activates the sleep function and the duration which the receiver turns off automatically.
SYSTEM STANDBY (Press AV I/⏻ 2 and I/⏻ 27 at the same time)	Receiver/TV/ VCR/ Satellite tuner/ CD player/ VCD player/ LD player/ DVD player/ MD deck/ DAT deck	Turns off the receiver and other Sony audio/ video components.
TOP MENU 23	DVD player	Displays DVD title.
TREBLE –/+ 12	Receiver	Adjusts the treble level.
TUNER 24	Receiver	To listen to radio programs.
TV CH +/– 15	TV	Selects preset TV channels.
TV/VIDEO 21	TV	Selects input signal: TV input or video input.
TV VOL +/– 14	TV	Adjusts the volume of the TV.
VIDEO 1 3	Receiver	To watch VCR. (VTR mode 3)
VIDEO 2 26	Receiver	To watch VCR. (VTR mode 1)
0-9 23	Receiver	Use with SHIFT to preset radio station or tuning to preset stations and with D.TUNING for direct tuning.
	CD player/ VCD player/ LD player/ MD deck/ DAT deck	Selects track numbers. 0 selects track 10.
	TV/VCR/ Satellite tuner	Selects channel numbers.

Remote Button	Operations	Function
>10 6	CD player/ VCD player/ LD player/ MD deck	Selects track numbers over 10.
-/-- 6	TV	Selects the channel entry mode, either one or two digit.
I/⏻ 27	Receiver	Turns the receiver on or off.
⏮/⏭ 7	VCR/ CD player/ VCD player/ LD player/ DVD player/ MD deck/ DAT deck/ Tape deck	Skips tracks.
◀◀/▶▶ 8	CD player/ VCD player/ DVD player	Searches tracks in the forward or backward direction.
	VCR/ LD player/ MD deck/ DAT deck/ Tape deck	Fastforwards or rewinds.
▶ 9	VCR/ CD player/ VCD player/ LD player/ DVD player/ MD deck/ DAT deck/ Tape deck	Starts playback.
❚❚ 10	VCR/ CD player/ VCD player/ LD player/ DVD player/ MD deck/ DAT deck/ Tape deck	Pauses playback or recording. (Also starts recording with components in recording standby.)
■ 19	VCR/ CD player/ VCD player/ LD player/ DVD player/ MD deck/ DAT deck/ Tape deck	Stops playback.
↩ 23	DVD player	Returns to the previous menu or exits the menu.
↑/↓/←/→ 23	DVD player	Selects a menu item.

Notes

- The DVD button on the remote is not available for receiver operation.
- When you press the input buttons (VIDEO 1, VIDEO 2), the input mode of the TV might not switch to the corresponding input mode that you want. In this case, press the TV/VIDEO button to switch the input mode of the TV.
- Some functions explained in this section may not work depending on the model.
- The above explanation is intended to serve as an example only. Therefore, depending on the component the above operation may not be possible or may operate differently than described.

Changing the factory setting of an input button

If the factory settings of the input buttons do not match your system components, you can change them. For example, if you have a tape deck and you do not have an MD deck, you can assign the MD/TAPE button to your tape deck.

Note that the settings of the TUNER button cannot be changed.

1 Hold down the input button whose input you want to change (for example, MD/TAPE).

2 Press the corresponding button of the component you want to assign to the input button (for example, 4 – Tape deck).

The following buttons are assigned to select the input:

To operate	Press
CD player	1
DAT deck	2
MD deck	3
Tape deck A	4
Tape deck B	5
LD player	6
VCR (command mode VTR 1*)	7
VCR (command mode VTR 2*)	8
VCR (command mode VTR 3*)	9
TV	0
DSS (Digital Satellite Receiver)	>10
DVD player	ENTER
VCD player	⏮

*Sony VCRs are operated with a VTR 1, 2 or 3 setting. These correspond to Beta, 8mm and VHS respectively.

Now you can use the MD/TAPE button to control the tape deck.

To reset a button to its factory setting

Repeat the above procedure.

To reset all the input buttons to their factory setting

Press I/⏻, AV I/⏻ and MASTER VOL – at the same time.

Precautions

On safety

Should any solid object or liquid fall into the cabinet, unplug the receiver and have it checked by qualified personnel before operating it any further.

On power sources

- Before operating the receiver, check that the operating voltage is identical with your local power supply. The operating voltage is indicated on the nameplate at the rear of the receiver.
- The receiver is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the receiver itself has been turned off.
- If you are not going to use the receiver for a long time, be sure to disconnect the receiver from the wall outlet. To disconnect the AC power cord, grasp the plug itself; never pull the cord.
- (Models of area code U, CA only)
  One blade of the plug is wider than the other for the purpose of safety and will fit into the wall outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- AC power cord must be changed only at the qualified service shop.

On heat buildup

Although the receiver heats up during operation, this is not a malfunction. If you continuously use this receiver at a large volume, the cabinet temperature of the top, side and bottom rises considerably. To avoid burning yourself, do not touch the cabinet.

On placement

- Place the receiver in a location with adequate ventilation to prevent heat buildup and prolong the life of the receiver.
- Do not place the receiver near heat sources, or in a place subject to direct sunlight, excessive dust or mechanical shock.
- Do not place anything on top of the cabinet that might block the ventilation holes and cause malfunctions.
- Use caution when placing the receiver on surfaces that have been specially treated (with wax, oil, polish, etc.) as staining or discoloration of the surface may result.

On operation

Before connecting other components, be sure to turn off and unplug the receiver.

On cleaning

Clean the cabinet, panel and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

If you have any question or problem concerning your receiver, please consult your nearest Sony dealer.

Troubleshooting

If you experience any of the following difficulties while using the receiver, use this troubleshooting guide to help you remedy the problem.

There is no sound or only a very low-level sound no matter which component is selected.

- Check that the speakers and components are connected securely and correctly.
- Check that both the receiver and all components are turned on.
- Check that you have selected the correct component on the receiver.
- Check that MASTER VOLUME –/+ is not set at "VOL MIN".
- Check that the SPEAKER A or SPEAKER B is not set to off (page 17).
- Press MUTING on the remote to cancel the muting function.

There is no sound from a specific component.

- Check that the component is connected correctly to the audio input jacks for that component.
- Check that the cord(s) used for the connection is (are) fully inserted into the jacks on both the receiver and the component.
- Check that you have selected the correct component on the receiver.

There is no sound from one of the front speakers.

- Connect a pair of headphones to the PHONES jack to verify that sound is output from the headphones. If only one channel is output from the headphones, the component may not be connected to the receiver correctly. Check that all the cords are fully inserted into the jacks on both the receiver and the component. If both channels are output from the headphones, the front speaker may not be connected to the receiver correctly. Check the connection of the front speaker which is not outputting any sound.

The left and right sounds are unbalanced or reversed.

- Check that the speakers and components are connected correctly and securely.
- Adjust the balance (page 15).

There is severe hum or noise.

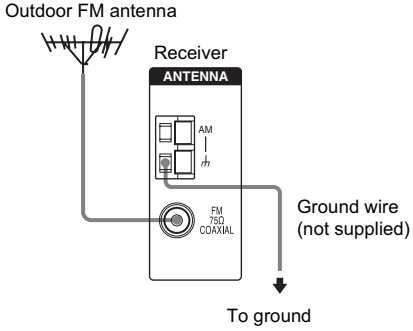
- Check that the speakers and components are connected securely.
- Check that the connecting cords are away from a transformer or motor, and at least 3 meters (10 feet) away from a TV set or fluorescent light.
- Move your TV away from the audio components.
- The plugs and jacks are dirty. Wipe them with a cloth slightly moistened with alcohol.

Recording cannot be done.

- Check that the components are connected correctly.
- Select the source component with input buttons.

The FM reception is poor.

- Use a 75-ohm coaxial cable (not supplied) to connect the receiver to an outdoor FM antenna as shown below. If you connect the receiver to an outdoor antenna, ground it against lightning. To prevent a gas explosion, do not connect the ground wire to a gas pipe.



Radio stations cannot be tuned in.

- Check that the antennas are connected securely. Adjust the antennas and connect an external antenna if necessary.
- The signal strength of the stations is too weak (when tuning in with automatic tuning). Use direct tuning.
- Make sure you set the tuning interval correctly (when tuning in AM stations with direct tuning).
- No stations have been preset or the preset stations have been cleared (when tuning by scanning preset stations). Preset the stations (page 12).

RDS does not work.*

- Make sure that you are tuned to an FM RDS station.
- Select a stronger FM station.

The RDS information that you want does not appear.*

- Contact the radio station and find out whether they actually provide the service in question. If so, the service may be temporarily out of order.

* Models of area code CEL, CEK only.

Remote control

The remote does not function.

- The DVD button on the remote is not available for receiver operation.
- Point the remote at the remote sensor on the receiver.
- Remove any obstacles in the path between the remote and the receiver.
- Replace all the batteries in the remote with new ones, if they are weak.
- Make sure you select the correct input on the remote.

Error message

If there is a malfunction, the display shows a message.

PROTECT

Irregular current is output from the speakers. Turn off the receiver, check the speaker connection and turn on the power again. If this problem persists, turn off the receiver and consult your nearest Sony dealer.

If you are unable to remedy the problem using the troubleshooting guide

Clearing the receiver's memory may remedy the problem (page 9). However, note that all memorized settings will be reset to their factory settings and you will have to readjust all settings on the receiver.

If the problem persist

Consult your nearest Sony dealer.

Specifications

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
(Models of area code U only)

With 8 ohm loads, both channels driven, from 20 – 20,000 Hz; rated 100 watts per channel minimum RMS power, with no more than 0.09% total harmonic distortion from 250 milliwatts to rated output.

Amplifier section

Power Output
Models of area code U, CA
Power Output at Stereo Mode
(8 ohms 1 kHz, THD 0.7%)
125 W + 125 W[1)]

Models of area code CEL, CEK
Power Output at Stereo Mode
(8 ohms 1 kHz, THD 0.7%)
100 W + 100 W[1)]

1) Measured under the following conditions:

Area code	Power requirements
U, CA	120 V AC, 60 Hz
CEL, CEK	230 V AC, 50 Hz

Frequency response

CD, MD/TAPE, VIDEO 1, 2	20 Hz – 50 kHz +0/–0.5 dB (with bass boost and tone bypassed)

Inputs (Analog)

CD, MD/TAPE, VIDEO 1, 2	Sensitivity: 500 mV Impedance: 50 kiloohms S/N[2)]: 85 dB (A, 500 mV[3)])

2) INPUT SHORT (with bass boost and tone bypassed).
3) Weighted network, input level.

Outputs (Analog)

MD/TAPE (OUT), VIDEO 1 (AUDIO OUT)	Voltage: 500 mV Impedance: 10 kiloohms

Bass Boost:	+8 dB at 70 Hz
Tone:	±10 dB at 100 Hz and 10 kHz

FM tuner section

Tuning range	87.5 – 108.0 MHz
Antenna	FM wire antenna
Antenna terminals	75 ohms, unbalanced
Intermediate frequency	10.7 MHz
Sensitivity	
Mono:	18.3 dBf, 2.2 µV/75 ohms
Stereo:	38.3 dBf, 22.5 µV/75 ohms
Useable sensitivity	11.2 dBf, 1 µV/75 ohms
S/N	
Mono:	76 dB
Stereo:	70 dB
Harmonic distortion at 1 kHz	
Mono:	0.3%
Stereo:	0.5%
Separation	45 dB at 1 kHz
Frequency response	30 Hz – 15 kHz, +0.5/–2 dB
Selectivity	60 dB at 400 kHz

AM tuner section

Tuning range	
Models of area code U, CA	
With 10-kHz tuning scale:	530 – 1,710 kHz[4)]
With 9-kHz tuning scale:	531 – 1,710 kHz[4)]
Models of area code CEL, CEK	
With 9-kHz tuning scale:	531 – 1,602 kHz
Antenna	Loop antenna
Intermediate frequency	450 kHz
Usable sensitivity	50 dB/m (at 1,000 kHz or 999 kHz)
S/N	54 dB (at 50 mV/m)
Harmonic distortion	0.5% (50 mV/m, 400 Hz)
Selectivity	
At 9 kHz:	35 dB
At 10 kHz:	40 dB

4) You can change the AM tuning scale to 9 kHz or 10 kHz. After tuning in any AM station, turn off the receiver. While holding down PRESET TUNING +, press I/⏻. All preset stations will be erased when you change the tuning scale. To reset the scale to 10 kHz (or 9 kHz), repeat the procedure.

General

Power requirements

Area code	Power requirements
U, CA	120 V AC, 60 Hz
CEL, CEK	230 V AC, 50/60 Hz

Power consumption

Area code	Power consumption
U	190 W
CA	270 VA
CEL, CEK	210 W

Power consumption (during standby mode)
0.5 W

AC outlets

Area code	AC outlets
U, CA	1 switched, 120 W/1A MAX
CEL, CEK	1 switched, 100 W MAX

Dimensions (w/h/d) (Approx.)
430 × 132.5 × 302 mm
(17 × 5 1/4 × 11 7/8 inches)
including projecting parts
and controls

Mass (Approx.) 7 kg (15 lb 7 oz)

Supplied accessories

FM wire antenna (1)
AM loop antenna (1)
Remote commander RM-U185 (1)
R6 (size-AA) batteries (2)

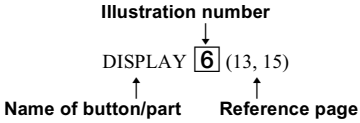
For details on the area code of the component you are using, see page 3.

Design and specifications are subject to change without notice.

List of button locations and reference pages

How to use page 28 and 29

Use this page to find the location of buttons that are mentioned in the text.



Main unit

ALPHABETICAL ORDER

A - L

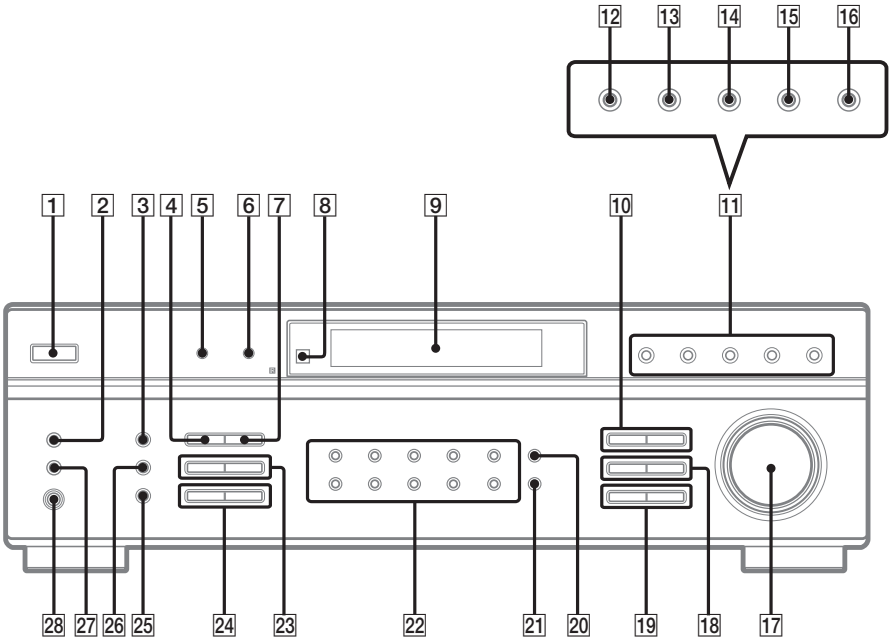
AM 7 (10, 11)
BALANCE L/R 10 (15)
BASS –/+ 19 (15)
BASS BOOST (button/indicator) 5 (15)
CD 15 (6, 10)
DIRECT 21 (11)
DISPLAY 6 (13, 15)
Display 9 (13, 15)
FM 4 (10, 11)
FM MODE 3 (10)
Input buttons 11 (6, 10, 16)
IR (receptor) 8 (19, 25)

M - Z

MASTER VOLUME –/+ 17 (9, 10, 24)
MD/TAPE 14 (6, 10)
MEMORY/ENTER 25 (11, 12, 16)
NAME 26 (16)
Numeric buttons 22 (11, 12)
PHONES (jack) 28 (10, 24)
PRESET TUNING –/+ 23 (12, 26)
SHIFT 20 (12)
SPEAKER A (button/indicator) 2 (8, 10, 17, 24)
SPEAKER B (button/indicator) 27 (8, 10, 17, 24)
TREBLE –/+ 18 (15)
TUNER 16 (6, 10, 11, 12, 16)
TUNING/CHAR –/+ 24 (10, 16)
VIDEO 1 12 (10)
VIDEO 2 13 (6, 10)

NUMBERS AND SYMBOLS

I/⏻ (power) 1 (9, 11, 26)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